

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

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PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing (day/month/year) 28 OCTOBER 2004 (28.10.2004)

Applicant's or agent's file reference FE241492	FOR FURTHER ACTION See paragraph 2 below
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International application No. PCT/KR2004/001881	International filing date (day/month/year) 26 JULY 2004 (26.07.2004)	Priority date(day/month/year) 25 JULY 2003 (25.07.2003)
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International Patent Classification (IPC) or both national classification and IPC

IPC7 H04B 1/69

Applicant

UTStarcom Korea Limited et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/KR	Authorized officer
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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/KR2004/001881

Box No. 1 Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing
☐ table(s) related to the sequence listing

b. format of material

- ☐ in written format
☐ in computer readable form

c. time of filing/furnishing

- ☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/KR2004/001881

**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	1 - 3	YES
	Claims		NO
Inventive step (IS)	Claims	1 - 3	YES
	Claims		NO
Industrial applicability (IA)	Claims	1 - 3	YES
	Claims		NO

2. Citations and explanations :

D1 : US 5991262

D2 : US 6310869

D3 : US 6396868

The claimed inventions relate to a method of allocating Walsh codes in a CDMA2000 system, in which the lowest Walsh code among a Walsh code set is allocated to a new channel if there are out-of-use channels among the previously allocated channels.

The closest prior art D1 discloses a method of reducing peak-to-average power ratio of a composite signal, which comprises the steps of producing a peak-reducing waveform coded with one or more codes which are orthogonal to a plurality of assigned codes and summing the peak-reducing waveform to the composite signal to produce the composite signal having reduced peak-to-average power ratio.

Both of the claimed invention and D1 relate to the same subject matter of reducing peak-to-average power ratio by proper selection of the Walsh code. However, D1 does not disclose a step of allocating the lowest Walsh code among a Walsh code set to a new channel, which is a prominent feature of the claimed invention. Moreover, this step of allocating the lowest Walsh code to reduce the peak-to-average power ratio is not obvious to a person skilled in the art or is not suggested in the prior art. Consequently, the claimed inventions 1-3 are considered to fulfil both of the requirement of novelty under PCT Article 33(2) and the requirement of inventive step under PCT Article 33(3).